

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
LITTLE SNAKE FIELD OFFICE**

**Focus Ranch Unit Geographic Area Plan  
DOI-BLM-CON010-2013-0016EA  
Attachment C  
Stormwater Management Plan**

Wellsites & Access Roads  
Colorado

**Prepared For:**

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**SWMP Preparation Date:**

**November 1, 2010**  
*Revised February 1, 2013*

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***Entek GRB LLC***  
***Stormwater Management Plan***  
***Master Plan***

**INTRODUCTION**

The Master Stormwater Management Plan (SWMP) is a general overview of construction activities that Entek GRB LLC (Entek) will conduct for oil and gas operations. It also outlines the nature of construction activities, sequencing, and Best Management Practices (BMPs). The detailed plan and specifics for each site will include: disturbed acreage, soil, soil erosion potential, quality of any discharge from the site, and the identification of receiving waters. Unless noted, all construction activities will meet or exceed Federal Surface Management Agency (FSMA) and Bureau of Land Management (BLM) Gold Book standards. Private surface owner input will also be utilized.

**SITE DESCRIPTION**

**Nature of Construction Activity**

Wellpad and access road construction for the development and production of oil and gas facilities.

**Construction Standards**

**Access Roads**

Running surface width to be 14'-16', total disturbed width to be no more than 50'. Depending on oil and gas production and exploration in the area, per the FSMA or private surface owner, the road may be widened into a standard road with a 24' running surface.

Borrow ditches to be back sloped 3:1 or shallower. The borrow ditches along the access roads will be reseeded if the well is completed as a producer. Reseeding of the borrow ditches will reduce the area utilized. Maximum grades will not exceed FSMA standards.

Culverts will be installed prior to commencement of drilling operations. Drainage will consist of borrow ditches on both sides of the road. Low water crossings will be used during drilling as conditions dictate; and upon completion, crossings will be upgraded with corrugated metal pipes and/or gravel bottomed low water crossings. Culverts will be placed on grade and aligned with the natural channel bed. Culvert sizes will be a minimum of 18" in diameter or as stipulated by FSMA or private surface owner.

Surfacing materials will consist of native material from the road crown. Topsoil will be windrowed during construction and placed in the borrow ditch back slope upon road completion. Back slope of borrow ditch will be reseeded.

Construction materials will consist of native materials from borrow ditches and location areas.

Surfacing materials will be obtained from available permitted sources, if needed, and consist of pit gravel. Topsoil will be removed prior to location construction from all disturbed areas. Approximately 6" of topsoil depth will be removed unless otherwise stipulated by FSMA or private surface owner.

**Wellpads**

Dimension of Proposed Facilities will be defined on an individual basis. Typically, there is no more than four (4) acres of total disturbance per wellpad.

Traveled portion of the production site will be gravel surfaced upon completion of production facility installation, and prior to production. Site preparation for production will be done with standard excavation equipment using native materials. Additional surface material will be obtained from commercial sources or an approved borrow area. Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment. If such equipment creates ruts in excess of four (4) inches deep, the soil will be deemed too wet. In this case, all construction activities which may result in erosion will cease until the soil is deemed dry enough to resume activities.

Production facilities may vary according to actual reservoir discovered and will be engineered upon completion of well tests. Production facilities will be clustered and placed away from cut & fill slopes to allow the maximum recontouring of such slopes.

No facilities will be constructed off location.

If necessary, or if stipulated by FSMA or private surface owner, production pit will be netted “bird-tight.”

**Pipelines and Flowlines**

Construction equipment for the pipelines will utilize the access roads as much as possible. The Right-of-Way (ROW) will include a 50' width from the center line of the access road ROW, as surveyed, with minimal disturbance.

Pipelines shall be constructed as shown on attached maps and plats for specific sites as required. Graders shall be used to construct or to clear the pipeline ROW wherever feasible. Angle dozers will be used if terrain dictates. The ROW shall not be cleared more than an additional 50' wide (preferably 5' wide on the soil stockpile side, and 20' wide on the working side of the trench minimum) without approval. Bladed materials shall be placed back into the cleared route once construction is completed. Pipelines will be welded and dragged by a dozer into place. Alternatively, certain portions of the pipeline may be constructed by laying pipe in the existing road borrow ditch, picking the pipe up with side boom cats, then welding and placing along side of the road. All construction will be with as little surface disturbance as possible.

Pipeline construction shall not block nor change the natural course of any drainage. Trenches will be dug with 1-4 backhoes; the number is subject to availability at the time of construction. A trencher will be used only if the backhoes are not available. Suspended pipelines, which are not currently anticipated, shall provide adequate clearance for maximum runoff, if needed.

Pipeline trenches shall be compacted during backfilling. Pipeline trenches shall be maintained in order to correct settlement and erosion conditions. Road crossings will be trenched to a depth of 5' prior to placing the pipeline in the trench. Following the placement of the pipeline into the trench, all open road cuts will be backfilled and compacted in order to maintain the integrity of the existing road.

Topsoil, as available, will be removed prior to pipeline construction from along the working side of the pipeline ROW and stockpiled for future reclamation. Topsoil depth of 6" will be removed, or as stipulated by FSMA or private surface owner.

Pipeline construction is anticipated to take approximately two (2) to four (4) weeks.

Anticipated equipment is as follows:

- 3 – Trucks
- 3 – Dozer, Track hoe, Blade

Anticipated full time personnel are as follows:

- 1 – Supervisor
- 1 – Pipeline supervisor
- 3 – Trenching crew (welders with helpers)

Part-time technical support persons will be onsite from time to time as necessary. No intermediate staging areas will be used.

Waterbars are to be constructed at least 1' deep, on the contour with approximately 2' of drop per 100' of waterbar to ensure drainage and extended into established vegetation.

All waterbars are to be constructed with the berm on the downhill side to prevent the soft material from silting in the trench. The initial waterbar will be constructed at the top of the back slope. Subsequent waterbars will follow the general spacing guidelines shown below:

<u>% SLOPE</u>	<u>SPACING INTERVAL (feet)</u>
2 or <	200
2 - 4	100
4 - 5	75
5 or >	50

## **PROPOSED SEQUENCE FOR MAJOR ACTIVITIES**

### **Access Roads/Wellpads/Pipelines and Flowlines**

#### **Phase I**

Roads will be built to crown/ditch standards. Ripping and dozing will be done on the contour to prevent erosion while building the road. There will be minimal traffic on the road during construction. Wellpad construction will be done simultaneously with road construction. The drilling rig will be moved onto the pad over the bladed road and drilling will begin. The FSMA, or private surface owner, will stipulate whether culverts will be installed at this point.

#### **Phase II**

The access roads will be graveled concurrently with wellpad completion. After the drilling rig is moved out, a truck mounted service rig will be moved in for well completion activities. Any additional operations, including well fracing, will be done at this point.

Final drainage design as designated or approved by the FSMA, or private surface owner, will be implemented. Culverts, low water crossings, installation of pipelines/flowlines, and equipment, etc. will be done in Phase II.

The pipeline will be laid along side the access road. Roughening will be used as an erosion control measure while the pipeline is laid. Top soil will be piled on one side and pipeline work will be completed on the opposite side. All construction equipment, including trucks, dozers, and sidebooms will utilize the graveled access road to insure there is no additional ground disturbance.

### **Phase III**

Well completion activities will have been completed by this point and the well may be put online. Phase III can last upwards of 50 years. There will be minimal vehicle traffic; 1 – 2 trucks per day may travel the road to do well maintenance. Depending on liquid production, a tanker truck may come to the site once every 1 - 30 days.

### **ESTIMATE OF TOTAL SITE DISTURBANCE**

See site specific details.

### **SUMMARY OF EXISTING DATA THAT DESCRIBE SOIL OR POTENTIAL FOR SOIL EROSION**

Field observation or National Resource Conservation Surface (NRCS) Map Unit Descriptions and/or Rangeland Productivity and Plan Composition reports.

### **DESCRIPTION OF EXISTING VEGETATION AND PERCENTAGE OF GROUND COVER**

See site specific details.

### **LOCATION AND DESCRIPTION OF POTENTIAL POLLUTANT SOURCES**

Potential pollutant sources include disturbed dirt on wellpads, access roads, and pipelines, drill cuttings, well stimulation chemicals, cement and additives, solid waste, sewage, trucks and construction equipment, including, but not limited to, cats, graders, dozers, etc, garbage and/or trash, and produced fluids. (See following section on Waste Management and Disposal).

Pollutant sources including tanks, separators, rig fuel, and all other production equipment will be set within a secondary containment system. A corrugated steel or earthen berm will be constructed around these facilities and will be able to hold 110% of the capacity of the largest tank.

All hazardous materials will be stored on pallets. The materials will be contained in heavy plastic with heavy paper over the plastic. See Table 1 - Hazardous Materials Table

### **Hazardous Materials**

Entek maintains a file containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances which are used during the course of construction, drilling, completion, and production operations in the Great Divide Basin. Entek has reviewed the Environmental Protection Agency's (EPA) Consolidated List of Chemicals Subject to Reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 (as amended) to identify any hazardous substances proposed for use in this project, as well as the EPA's list of Extremely Hazardous substances as defined in 40 CFR 355, as amended. Substances included on either of these lists that could be used in this project are listed in Table 1.



Entek and its contractors will comply with all applicable federal laws and regulations existing or thereafter enacted or promulgated. Entek and its contractors will locate, handle, and store hazardous substances in an appropriate manner that prevents them from contaminating soil and water resources or otherwise sensitive environments. Any release of hazardous substances (leaks, spills, etc.) in excess of the reportable quantities established by 40 CFR, Part 117, would be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended. If the release of a hazardous substance in a reportable quantity would occur, a copy of a report would be furnished to the FSMAs Authorized Officer (AO) and all other appropriate federal and state agencies.

#### **LOCATION AND DESCRIPTION OF ANTICIPATED ALLOWABLE SOURCES OF NON-STORMWATER DISCHARGE AT THE SITE**

Produced fluid will be contained in test tanks during completion and testing, and be hauled to an approved disposal site.

#### **NAME OF RECEIVING WATER(S)**

See site specific information.

#### **STORMWATER MANAGEMENT CONTROLS**

##### **SWMP Administrator**

The SWMP was designed by Banko Petroleum Management, Inc. (Banko) for Entek. The implementation of the SWMP will be carried out by Entek and its employees. The SWMP contact is:

##### Denver Office:

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#### **BMPs FOR STORMWATER POLLUTION PREVENTION (SEE APPENDIX OF GENERAL EROSION & SEDIMENT CONTROL BMPs)**

Best Management Practices (BMPs) will be utilized for all three phases of construction; before, during, and post. Site specific BMPs will be listed under that location.

The following BMPs are either in place or may be installed before beginning construction: Existing vegetation, tree slash/brush piles, straw bales, and silt fence.

The following BMPs may either be in place or installed during construction (Phase I): Existing vegetation, tree slash/brush piles, straw bales, drainage ditches, roughening, culverts, waterbars, turnouts, catch basins, and silt fence.

The following BMPs are either in place or may be installed during the production/interim phase (Phase II): Existing vegetation, tree slash/brush piles, straw bales, drainage ditches, berms/earth dikes, catch basins, culverts, waterbars, turnouts, low water crossings, seeding and mulching.

The following BMPs are either in place or may be installed during the final reclamation phase (Phase III): There will be no active construction and all vehicle traffic will cease: Permanent seeding, culverts may be removed or remain in place, and revegetation., per the FSMA or private surface owner (please see site specific details per location).

### **STRUCTURAL PRACTICES FOR EROSION AND SEDIMENT CONTROL**

*If any of the following BMPs will be used on the site specific location, a diagram can be found under Appendix A.*

#### **Diversion Ditches/Water Bars**

Diversion ditches or water bars are designed to divert water from around the construction activity. They are also used to limit the accumulation of water in the construction zone by diverting water to nearby stabilized or well vegetated areas.

#### **Road Surface Slope**

Road surface slopes shed water off road surfaces into stabilized ditches or well vegetated areas.

#### **Drainage Dips**

Drainage dips direct water runoff from roads into well stabilized vegetative areas. They are constructed diagonally across the road surface. Rip-rap is placed at the drainage dip to slow runoff.

#### **Roadside Ditches**

Roadside ditches require constructing channels to parallel the road. The ditches direct water flow from road surface to well stabilized areas.

#### **Turnouts/Wing Ditches**

Turnouts and wing ditches are extensions of roadside ditches used to remove run-off water from roadside ditches into well stabilized areas.

#### **Road Crowning**

A gravel surface of 3" – 4" will be placed on the crown of the road. This gravel surface will minimize dust and keep sediment from stormwater runoff to a minimum.

#### **Culverts**

Typically 18" X 30' culverts are requested by FSMA or private surface owner for stormwater runoff. Culverts will direct roadside ditch flow underneath the road into either another roadside ditch or out onto well stabilized areas. Usually culverts are either soft armored or hard armored at both the inlet and outlet.

**Berms**

Berms will be placed around all production facilities. They will be compacted and able to contain 110% of the capacity of the largest tank. Maintenance will occur on an as needed basis.

**Silt Fence**

Silt fence is fabric fence utilized as a primary perimeter control around a construction site. It is embedded into the soil and supported by posts spaced no greater than 10' apart. It is then backfilled at the base of the fabric.

**Straw Bales**

This technique uses bound straw bales to filter sediment from runoff. Straw bales are embedded at least 4" into a trench and anchored with support stakes. There will be a minimum of two (2) stakes per bale and stakes may be no farther than 12" apart. Backfill will be tight around the bales to prevent sediment from running off underneath.

**Roughening**

This technique uses horizontal grooves created by construction equipment to reduce runoff. Tracks are created perpendicular to water flow on the slope.

**Catch Basins / Sediment Traps**

The catch basin dimensions will be 12' in diameter and 3' deep. Straw bales will be placed around the catch basins to catch all silt run-off and allow for settling of solids. Catch basins will be backfilled upon drilling completion and prior to interim reclamation.

**NON-STRUCTURAL PRACTICES FOR EROSION AND SEDIMENT CONTROL****Permanent Vegetation**

Permanent vegetation will occur after all drilling operations have ceased. A FSMA, or private surface owner, seed mix will be placed in the areas that will be reclaimed. During production, a portion of the wellpad needed for production will not be reclaimed until the life of the well is complete. At that time, final reclamation will take place and all remaining disturbed areas will be reseeded. The permanent vegetation during the production phase of the well will aid in the containment of sediment for the remaining disturbed areas.

**Existing Vegetation**

Any existing vegetation around the construction site will aid in keeping sediment from leaving the immediate area and entering any state waters.

**Mulching**

Mulching is used to minimize rainfall impact, protect seeding for final stabilization, prevent moisture loss, and reduce lost stabilization from predation of seeds by birds. Straw mulch will be anchored by crimping, or other technique.

**Materials Handling and Spill Prevention**

Refer to Emergency Response Plan for Accidental Releases and Fire Prevention Plan

**Dedicated Concrete or Asphalt Batch Plants**

There will be no concrete or asphalt batch plants on any of the locations.

### **Vehicle Tracking Control**

All access roads will be gravel surfaced. Surfacing materials will be obtained from available permitted sources, if needed, and consist of pit gravel.

### **Waste Management and Disposal**

Sewage disposal facilities will be in accordance with state and local regulations. Sewage may not be buried on location or put in a borehole.

Garbage and other waste will be contained in a portable trash cage which will be totally enclosed with small mesh wire. Cage and contents will be transported to and trash dumped at a Colorado Department of Public Health and Environment (CDPHE) approved sanitary landfill upon completion of operations.

Trash will be picked up, if scattered, and contained in trash cage as soon as practical after rig is moved off.

Upon release of the drilling rig, rathole and mousehole will be filled. Debris and excess equipment will be removed.

### **Groundwater and Stormwater Dewatering**

Evaporation will be the sole source of stormwater dewatering. No groundwater dewatering will take place at any of the sites.

### **FINAL STABILIZATION**

Final stabilization is reached when:

- 1) All ground surface disturbing activities at the site have been completed ; and
- 2) Uniform vegetative cover has been established with a density of at least 70% of pre-disturbance levels or equivalent permanent and physical erosion reduction methods have been employed;

Upon final stabilization, the permittee is no longer required to have coverage under the Colorado Discharge Permit System (CDPS).

After entering into the final stabilization phase, the permittee can file for an Inactivation Notice prior to termination of SWMP.

### **Surface Restoration (General)**

Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment. If such equipment creates ruts in excess of four (4) inches deep, the soil will be deemed too wet.

Earthwork for interim and final reclamation must be completed within six (6) months of well completion or plugging (weather permitting).

In areas that will not be drill-seeded, the seed mix will be broadcast-seeded at twice the application rate shown and covered 0.25 to 0.5 inches deep with a harrow or drag bar or will be broadcast-seeded into imprints, such as fresh dozer cleat marks.

No seeding will occur from May 15 to September 15. Fall seeding is preferred and will be conducted after September 15 and prior to ground freezing. Spring seeding will be conducted after the frost leaves the ground and no later than May 15.

Annual or noxious weeds shall be controlled on all disturbed areas as directed by the FSMA Field Office Manager or private surface owner. An intensive weed monitoring and control program will be implemented beginning the first growing season after interim and final reclamation. Noxious weeds that have been identified during monitoring will be promptly treated and controlled. A Pesticide Use Proposal (PUP) will be submitted to the FSMA and the private surface owner for approval prior to the use of herbicides. All reclamation equipment will be cleaned prior to use to reduce the potential for introduction of noxious weeds or other undesirable non-native species. The operator will coordinate all weed and insect control measures with state and/or local management agencies.

Reclaimed areas will be monitored annually. Actions will be taken to ensure that reclamation standards are met as quickly as reasonably practical.

On federal lands, reclamation monitoring will be documented in a reclamation report and submitted to the FSMA AO. The report will document compliance with all aspects of the reclamation objectives and standards, identify whether the reclamation objectives and standards are likely to be achieved in the near future without additional actions, and identify actions that have been or will be taken to meet the objectives and standards. The report will also include acreage figures for: Initial Disturbed Acres; Successful Interim Reclaimed Acres; and Successful Final Reclaimed Acres. Reports will not be submitted for sites approved by the AO in writing as having met interim or final reclamation standards. Any time 30% or more of a reclaimed area is redisturbed, monitoring will be reinitiated.

The AO will be informed when reclamation has been completed, is successful, and the site is ready for final inspection.

#### **Interim Restoration (Production)**

Rehabilitation of unneeded, previously disturbed areas will consist of backfilling and contouring the reserve pit area, back sloping, and contouring all cut & fill slopes. These areas will be reseeded.

Wellpad size will be reduced to minimum size necessary to conduct safe operations. Cut & fills will be reduced to 3:1 or shallower.

Reserve pits will be closed and backfilled as soon as the pit contents are dry enough to do so, or no later than the end of the next full summer following rig release, whichever comes first, to allow sufficient time for the pit contents to dry. Reserve pits remaining open after this period will require written authorization of the AO. Immediately upon well completion, any hydrocarbons or trash in the reserve and flare pits will be removed. Pits will be allowed to dry, be pumped dry, or solidified in-situ prior to backfilling.

Following completion activities, pit liners will be removed or removed to the solids level and disposed of at an approved landfill, or treated to prevent their reemergence to the surface and interference with long-term successful revegetation. If it was necessary to line the pit with a synthetic liner, the pit will not be trenched (cut) or filled (squeezed) while containing fluids. When dry, the pit will be backfilled with a minimum of 5' of soil material. In relatively flat areas, the pit area will be slightly mounded to allow for settling and to promote surface drainage away from the backfilled pit.

The portions of the cleared well site not needed for operational and safety purposes will be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Sufficient level area will remain for setup of a workover rig and to park equipment. In some cases, rig anchors may need to be pulled and reset after recontouring to allow for maximum interim reclamation.

Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including road cut & fills, and to within a few feet of the production facilities, unless an all-weather, surfaced, access route or small “teardrop” turnaround is needed on the well pad.

Initial seedbed preparation will consist of backfilling, leveling, and ripping all compacted areas. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding. Seeding will be conducted no more than 24 hours following completion of final seedbed preparation. A certified weed-free seed mix designed by FSMA or private surface owner to meet reclamation standards will be used. The seed mix will be used on all disturbed surfaces including pipelines and road cut & fill slopes.

To help mitigate the contrast of recontoured slopes, reclamation will include measures to feather cleared lines of vegetation and to save and redistribute cleared trees, debris, and rock over recontoured cut & fill slopes.

A proposed seed mixture for each location will be agreed upon by the FSMA and/or private surface owners.

#### **Final Restoration (P & A – Removal of equipment)**

Flowlines on location will be removed before site reclamation and all flowlines between the wellsite and production facilities will remain in place and will be filled with water.

If necessary to ensure timely revegetation, the pad will be fenced to FSMA or private surface owner standards to exclude livestock grazing for the first two growing seasons or until seeded species become firmly established, whichever comes later. Fencing will meet standards found on page 18 of the Gold Book, 4<sup>th</sup> Edition, or will be fenced with operational electric fencing.

Revegetation will be accomplished by planting mixed grasses as specified below. Revegetation is recommended for road area as well as around production site.

A proposed seed mixture for each location will be agreed upon by the FSMA and/or private surface owners.

Initial seedbed preparation will consist of backfilling, leveling, and ripping all compacted areas. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding. Seeding will be conducted no more than 24 hours following completion of final seedbed preparation. A certified weed-free seed mix designed by FSMA for private surface owner to meet reclamation standards will be used. The seed mix will be used on all disturbed surfaces including pipelines and road cut & fill slopes.

Distribute topsoil, if any remains, evenly over the location, and seed according to the approved seed mixture. If needed the access road and location shall be ripped or disked prior to seeding. Perennial vegetation must be established. Additional work shall be required in case of seeding failures, etc.

All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Resalvaged topsoil will be spread evenly over the entire disturbed site to ensure successful revegetation. To help mitigate the contrast of recontoured slopes, reclamation will include measures to feather cleared lines of vegetation and to save and redistribute cleared trees, woody debris, and large rocks over recontoured cut & fill slopes.

### **INSPECTION AND MAINTENANCE**

Entek will make thorough inspections, in accordance with the requirements set forth by CDPHE Water Quality Division (WQD). The inspection schedule is as follows:

- 1) While site is under construction, an inspection is required at least every fourteen (14) calendar days;
- 2) Post storm event inspections must be conducted within 72 hours after the end of any precipitation or snowmelt event that causes surface erosion.

Exceptions are as follows: (per CDPS General Permit effective July 1, 2007, and expiring at midnight, June 30, 2012):

#### **Post Storm Event Inspections at Temporary Idle Sites**

If no construction activities will occur during the 48 hours following a storm event, post-storm inspections shall be conducted prior to commencing construction activities, but no later than 72 hours following the storm event. The occurrence of any such delayed inspection must be documented in the inspection record. Inspections still must be conducted at least every 14 calendar days.

#### **Inspection at Completed Sites/Areas**

For sites or portions of sites that meet the following criteria, but final stabilization has not been achieved due to a vegetative cover that has not been established, the permittee shall make a thorough inspection of their stormwater management system at least once every month, and post-storm event inspections are not required.

- 1) All construction activities that will result in surface ground disturbance are completed;
- 2) All activities required for final stabilization, in accordance with the SWMP, have been completed, with the exception of the application of seed that has not occurred due to seasonal conditions or the necessity for additional seed application to augment previous efforts; and
- 3) The SWMP must be amended to indicate those areas that will be inspected in accordance with the reduced schedule allowed for in this subsection

#### **Winter Conditions Inspections Exclusion**

Inspections are not required at sites where snow cover exists over the entire site for an extended period, and melting conditions posing a risk of surface erosion do not exist. This exception is applicable only during the period where melting conditions do not exist, and applies to the routine 14-day and monthly inspections, as well as the post storm event inspections. The following information must be documented in the inspection record for use of this exclusion: dates when snow covered occurred, date when construction ceased, and date melting conditions began. Inspections, as described above, are required at all other times.

#### **Reports and Record Keeping**

Inspection records will be kept on file for a minimum of three (3) years from expiration or inactivation of permit coverage. See Site Specific Records.

**EMPLOYEE TRAINING**

Entek will train all employees and contractors prior to beginning construction. They will be trained in the contents and requirements of the SWMP, erosion, and sediment control and BMPs (installation and maintenance) good housekeeping, and inspection procedures, including but not limited to inspections, filing reports, and maintaining BMPs.

**CERTIFICATION**

I certify under penalty of the law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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February 1, 2013

Date

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Tim Hopkins

Regional Manager for Entek GRB LLC



## **APPENDIX A**

Typical Culvert Detail

Standard Catch Basin - Section

Surface Roughening - Section

Typical Wing Ditch Detail

Diversion Ditch – Unlined (Detail)

Erosion Bale Trenching and Staking

Typical Straw Waddle Detail

Typical Earthen Berm Detail